

SEQUENCE LISTING

<110> Mingdong Zhou

<120> ERBB3 BASED METHODS AND COMPOSITIONS FOR TREATING NEOPLASMS

<130> 52401-20003.00

<140> 10/516,759

<141> 2005-03-26

<150> PCT/CN03/00217

<151> 2003-03-26

<150> CH 02116259.X

<151> 2002-03-26

<160> 16

<170> FastSEQ for Windows Version 4.0

<210> 1

<211> 1342

<212> PRT

<213> Homo sapiens

<400> 1

```

Met Arg Ala Asn Asp Ala Leu Gln Val Leu Gly Leu Leu Phe Ser Leu
1             5             10             15
Ala Arg Gly Ser Glu Val Gly Asn Ser Gln Ala Val Cys Pro Gly Thr
20             25             30
Leu Asn Gly Leu Ser Val Thr Gly Asp Ala Glu Asn Gln Tyr Gln Thr
35             40             45
Leu Tyr Lys Leu Tyr Glu Arg Cys Glu Val Val Met Gly Asn Leu Glu
50             55             60
Ile Val Leu Thr Gly His Asn Ala Asp Leu Ser Phe Leu Gln Trp Ile
65             70             75             80
Arg Glu Val Thr Gly Tyr Val Leu Val Ala Met Asn Glu Phe Ser Thr
85             90             95
Leu Pro Leu Pro Asn Leu Arg Val Val Arg Gly Thr Gln Val Tyr Asp
100            105            110
Gly Lys Phe Ala Ile Phe Val Met Leu Asn Tyr Asn Thr Asn Ser Ser
115            120            125
His Ala Leu Arg Gln Leu Arg Leu Thr Gln Leu Thr Glu Ile Leu Ser
130            135            140

```

Gly Gly Val Tyr Ile Glu Lys Asn Asp Lys Leu Cys His Met Asp Thr
 145 150 155 160
 Ile Asp Trp Arg Asp Ile Val Arg Asp Arg Asp Ala Glu Ile Val Val
 165 170 175
 Lys Asp Asn Gly Arg Ser Cys Pro Pro Cys His Glu Val Cys Lys Gly
 180 185 190
 Arg Cys Trp Gly Pro Gly Ser Glu Asp Cys Gln Thr Leu Thr Lys Thr
 195 200 205
 Ile Cys Ala Pro Gln Cys Asn Gly His Cys Phe Gly Pro Asn Pro Asn
 210 215 220
 Gln Cys Cys His Asp Glu Cys Ala Gly Gly Cys Ser Gly Pro Gln Asp
 225 230 235 240
 Thr Asp Cys Phe Ala Cys Arg His Phe Asn Asp Ser Gly Ala Cys Val
 245 250 255
 Pro Arg Cys Pro Gln Pro Leu Val Tyr Asn Lys Leu Thr Phe Gln Leu
 260 265 270
 Glu Pro Asn Pro His Thr Lys Tyr Gln Tyr Gly Gly Val Cys Val Ala
 275 280 285
 Ser Cys Pro His Asn Phe Val Val Asp Gln Thr Ser Cys Val Arg Ala
 290 295 300
 Cys Pro Pro Asp Lys Met Glu Val Asp Lys Asn Gly Leu Lys Met Cys
 305 310 315 320
 Glu Pro Cys Gly Gly Leu Cys Pro Lys Ala Cys Glu Gly Thr Gly Ser
 325 330 335
 Gly Ser Arg Phe Gln Thr Val Asp Ser Ser Asn Ile Asp Gly Phe Val
 340 345 350
 Asn Cys Thr Lys Ile Leu Gly Asn Leu Asp Phe Leu Ile Thr Gly Leu
 355 360 365
 Asn Gly Asp Pro Trp His Lys Ile Pro Ala Leu Asp Pro Glu Lys Leu
 370 375 380
 Asn Val Phe Arg Thr Val Arg Glu Ile Thr Gly Tyr Leu Asn Ile Gln
 385 390 395 400
 Ser Trp Pro Pro His Met His Asn Phe Ser Val Phe Ser Asn Leu Thr
 405 410 415
 Thr Ile Gly Gly Arg Ser Leu Tyr Asn Arg Gly Phe Ser Leu Leu Ile
 420 425 430
 Met Lys Asn Leu Asn Val Thr Ser Leu Gly Phe Arg Ser Leu Lys Glu
 435 440 445
 Ile Ser Ala Gly Arg Ile Tyr Ile Ser Ala Asn Arg Gln Leu Cys Tyr
 450 455 460
 His His Ser Leu Asn Trp Thr Lys Val Leu Arg Gly Pro Thr Glu Glu
 465 470 475 480
 Arg Leu Asp Ile Lys His Asn Arg Pro Arg Arg Asp Cys Val Ala Glu
 485 490 495
 Gly Lys Val Cys Asp Pro Leu Cys Ser Ser Gly Gly Cys Trp Gly Pro
 500 505 510

Gly	Pro	Gly	Gln	Cys	Leu	Ser	Cys	Arg	Asn	Tyr	Ser	Arg	Gly	Gly	Val	
515						520						525				
Cys	Val	Thr	His	Cys	Asn	Phe	Leu	Asn	Gly	Glu	Pro	Arg	Glu	Phe	Ala	
530						535						540				
His	Glu	Ala	Glu	Cys	Phe	Ser	Cys	His	Pro	Glu	Cys	Gln	Pro	Met	Glu	
545						550						555			560	
Gly	Thr	Ala	Thr	Cys	Asn	Gly	Ser	Gly	Ser	Asp	Thr	Cys	Ala	Gln	Cys	
			565						570						575	
Ala	His	Phe	Arg	Asp	Gly	Pro	His	Cys	Val	Ser	Ser	Cys	Pro	His	Gly	
			580						585						590	
Val	Leu	Gly	Ala	Lys	Gly	Pro	Ile	Tyr	Lys	Tyr	Pro	Asp	Val	Gln	Asn	
595						600						605				
Glu	Cys	Arg	Pro	Cys	His	Glu	Asn	Cys	Thr	Gln	Gly	Cys	Lys	Gly	Pro	
610						615						620				
Glu	Leu	Gln	Asp	Cys	Leu	Gly	Gln	Thr	Leu	Val	Leu	Ile	Gly	Lys	Thr	
625						630						635			640	
His	Leu	Thr	Met	Ala	Leu	Thr	Val	Ile	Ala	Gly	Leu	Val	Val	Ile	Phe	
			645						650						655	
Met	Met	Leu	Gly	Gly	Thr	Phe	Leu	Tyr	Trp	Arg	Gly	Arg	Arg	Ile	Gln	
			660						665						670	
Asn	Lys	Arg	Ala	Met	Arg	Arg	Tyr	Leu	Glu	Arg	Gly	Glu	Ser	Ile	Glu	
675						680						685				
Pro	Leu	Asp	Pro	Ser	Glu	Lys	Ala	Asn	Lys	Val	Leu	Ala	Arg	Ile	Phe	
690						695						700				
Lys	Glu	Thr	Glu	Leu	Arg	Lys	Leu	Lys	Val	Leu	Gly	Ser	Gly	Val	Phe	
705						710						715			720	
Gly	Thr	Val	His	Lys	Gly	Val	Trp	Ile	Pro	Glu	Gly	Glu	Ser	Ile	Lys	
			725						730						735	
Ile	Pro	Val	Cys	Ile	Lys	Val	Ile	Glu	Asp	Lys	Ser	Gly	Arg	Gln	Ser	
			740						745						750	
Phe	Gln	Ala	Val	Thr	Asp	His	Met	Leu	Ala	Ile	Gly	Ser	Leu	Asp	His	
755						760						765				
Ala	His	Ile	Val	Arg	Leu	Leu	Gly	Leu	Cys	Pro	Gly	Ser	Ser	Leu	Gln	
770						775						780				
Leu	Val	Thr	Gln	Tyr	Leu	Pro	Leu	Gly	Ser	Leu	Leu	Asp	His	Val	Arg	
785						790						795			800	
Gln	His	Arg	Gly	Ala	Leu	Gly	Pro	Gln	Leu	Leu	Leu	Asn	Trp	Gly	Val	
			805						810						815	
Gln	Ile	Ala	Lys	Gly	Met	Tyr	Tyr	Leu	Glu	Glu	His	Gly	Met	Val	His	
			820						825						830	
Arg	Asn	Leu	Ala	Ala	Arg	Asn	Val	Leu	Leu	Lys	Ser	Pro	Ser	Gln	Val	
835						840						845				
Gln	Val	Ala	Asp	Phe	Gly	Val	Ala	Asp	Leu	Leu	Pro	Pro	Asp	Asp	Lys	
850						855						860				
Gln	Leu	Leu	Tyr	Ser	Glu	Ala	Lys	Thr	Pro	Ile	Lys	Trp	Met	Ala	Leu	
865						870						875			880	

Glu Ser Ile His Phe Gly Lys Tyr Thr His Gln Ser Asp Val Trp Ser			
	885	890	895
Tyr Gly Val Thr Val Trp Glu Leu Met Thr Phe Gly Ala Glu Pro Tyr			
	900	905	910
Ala Gly Leu Arg Leu Ala Glu Val Pro Asp Leu Leu Glu Lys Gly Glu			
	915	920	925
Arg Leu Ala Gln Pro Gln Ile Cys Thr Ile Asp Val Tyr Met Val Met			
	930	935	940
Val Lys Cys Trp Met Ile Asp Glu Asn Ile Arg Pro Thr Phe Lys Glu			
945	950	955	960
Leu Ala Asn Glu Phe Thr Arg Met Ala Arg Asp Pro Pro Arg Tyr Leu			
	965	970	975
Val Ile Lys Arg Glu Ser Gly Pro Gly Ile Ala Pro Gly Pro Glu Pro			
	980	985	990
His Gly Leu Thr Asn Lys Lys Leu Glu Glu Val Glu Leu Glu Pro Glu			
	995	1000	1005
Leu Asp Leu Asp Leu Asp Leu Glu Ala Glu Glu Asp Asn Leu Ala Thr			
1010	1015	1020	
Thr Thr Leu Gly Ser Ala Leu Ser Leu Pro Val Gly Thr Leu Asn Arg			
1025	1030	1035	1040
Pro Arg Gly Ser Gln Ser Leu Leu Ser Pro Ser Ser Gly Tyr Met Pro			
	1045	1050	1055
Met Asn Gln Gly Asn Leu Gly Glu Ser Cys Gln Glu Ser Ala Val Ser			
	1060	1065	1070
Gly Ser Ser Glu Arg Cys Pro Arg Pro Val Ser Leu His Pro Met Pro			
	1075	1080	1085
Arg Gly Cys Leu Ala Ser Glu Ser Ser Glu Gly His Val Thr Gly Ser			
1090	1095	1100	
Glu Ala Glu Leu Gln Glu Lys Val Ser Met Cys Arg Ser Arg Ser Arg			
1105	1110	1115	1120
Ser Arg Ser Pro Arg Pro Arg Gly Asp Ser Ala Tyr His Ser Gln Arg			
	1125	1130	1135
His Ser Leu Leu Thr Pro Val Thr Pro Leu Ser Pro Pro Gly Leu Glu			
	1140	1145	1150
Glu Glu Asp Val Asn Gly Tyr Val Met Pro Asp Thr His Leu Lys Gly			
	1155	1160	1165
Thr Pro Ser Ser Arg Glu Gly Thr Leu Ser Ser Val Gly Leu Ser Ser			
	1170	1175	1180
Val Leu Gly Thr Glu Glu Glu Asp Glu Asp Glu Glu Tyr Glu Tyr Met			
1185	1190	1195	1200
Asn Arg Arg Arg Arg His Ser Pro Pro His Pro Pro Arg Pro Ser Ser			
	1205	1210	1215
Leu Glu Glu Leu Gly Tyr Glu Tyr Met Asp Val Gly Ser Asp Leu Ser			
	1220	1225	1230
Ala Ser Leu Gly Ser Thr Gln Ser Cys Pro Leu His Pro Val Pro Ile			
	1235	1240	1245

Met Pro Thr Ala Gly Thr Thr Pro Asp Glu Asp Tyr Glu Tyr Met Asn
1250 1255 1260
Arg Gln Arg Asp Gly Gly Gly Pro Gly Gly Asp Tyr Ala Ala Met Gly
1265 1270 1275 1280
Ala Cys Pro Ala Ser Glu Gln Gly Tyr Glu Glu Met Arg Ala Phe Gln
1285 1290 1295
Gly Pro Gly His Gln Ala Pro His Val His Tyr Ala Arg Leu Lys Thr
1300 1305 1310
Leu Arg Ser Leu Glu Ala Thr Asp Ser Ala Phe Asp Asn Pro Asp Tyr
1315 1320 1325
Trp His Ser Arg Leu Phe Pro Lys Ala Asn Ala Gln Arg Thr
1330 1335 1340

<210> 2

<211> 640

<212> PRT

<213> Homo sapiens

<400> 2

Met Arg Ala Asn Asp Ala Leu Gln Val Leu Gly Leu Leu Phe Ser Leu
1 5 10 15
Ala Arg Gly Ser Glu Val Gly Asn Ser Gln Ala Val Cys Pro Gly Thr
20 25 30
Leu Asn Gly Leu Ser Val Thr Gly Asp Ala Glu Asn Gln Tyr Gln Thr
35 40 45
Leu Tyr Lys Leu Tyr Glu Arg Cys Glu Val Val Met Gly Asn Leu Glu
50 55 60
Ile Val Leu Thr Gly His Asn Ala Asp Leu Ser Phe Leu Gln Trp Ile
65 70 75 80
Arg Glu Val Thr Gly Tyr Val Leu Val Ala Met Asn Glu Phe Ser Thr
85 90 95
Leu Pro Leu Pro Asn Leu Arg Val Val Arg Gly Thr Gln Val Tyr Asp
100 105 110
Gly Lys Phe Ala Ile Phe Val Met Leu Asn Tyr Asn Thr Asn Ser Ser
115 120 125
His Ala Leu Arg Gln Leu Arg Leu Thr Gln Leu Thr Glu Ile Leu Ser
130 135 140
Gly Gly Val Tyr Ile Glu Lys Asn Asp Lys Leu Cys His Met Asp Thr
145 150 155 160
Ile Asp Trp Arg Asp Ile Val Arg Asp Arg Asp Ala Glu Ile Val Val
165 170 175
Lys Asp Asn Gly Arg Ser Cys Pro Pro Cys His Glu Val Cys Lys Gly
180 185 190
Arg Cys Trp Gly Pro Gly Ser Glu Asp Cys Gln Thr Leu Thr Lys Thr
195 200 205

Ile Cys Ala Pro Gln Cys Asn Gly His Cys Phe Gly Pro Asn Pro Asn			
210	215	220	
Gln Cys Cys His Asp Glu Cys Ala Gly Gly Cys Ser Gly Pro Gln Asp			
225	230	235	240
Thr Asp Cys Phe Ala Cys Arg His Phe Asn Asp Ser Gly Ala Cys Val			
	245	250	255
Pro Arg Cys Pro Gln Pro Leu Val Tyr Asn Lys Leu Thr Phe Gln Leu			
	260	265	270
Glu Pro Asn Pro His Thr Lys Tyr Gln Tyr Gly Gly Val Cys Val Ala			
	275	280	285
Ser Cys Pro His Asn Phe Val Val Asp Gln Thr Ser Cys Val Arg Ala			
290	295	300	
Cys Pro Pro Asp Lys Met Glu Val Asp Lys Asn Gly Leu Lys Met Cys			
305	305	310	315
Glu Pro Cys Gly Gly Leu Cys Pro Lys Ala Cys Glu Gly Thr Gly Ser			
	320	325	330
Gly Ser Arg Phe Gln Thr Val Asp Ser Ser Asn Ile Asp Gly Phe Val			
	335	340	345
Asn Cys Thr Lys Ile Leu Gly Asn Leu Asp Phe Leu Ile Thr Gly Leu			
	350	355	360
Asn Gly Asp Pro Trp His Lys Ile Pro Ala Leu Asp Pro Glu Lys Leu			
365	370	375	
Asn Val Phe Arg Thr Val Arg Glu Ile Thr Gly Tyr Leu Asn Ile Gln			
380	385	390	400
Ser Trp Pro Pro His Met His Asn Phe Ser Val Phe Ser Asn Leu Thr			
	405	410	415
Thr Ile Gly Gly Arg Ser Leu Tyr Asn Arg Gly Phe Ser Leu Leu Ile			
	420	425	430
Met Lys Asn Leu Asn Val Thr Ser Leu Gly Phe Arg Ser Leu Lys Glu			
	435	440	445
Ile Ser Ala Gly Arg Ile Tyr Ile Ser Ala Asn Arg Gln Leu Cys Tyr			
450	455	460	
His His Ser Leu Asn Trp Thr Lys Val Leu Arg Gly Pro Thr Glu Glu			
465	470	475	480
Arg Leu Asp Ile Lys His Asn Arg Pro Arg Arg Asp Cys Val Ala Glu			
	485	490	495
Gly Lys Val Cys Asp Pro Leu Cys Ser Ser Gly Gly Cys Trp Gly Pro			
	500	505	510
Gly Pro Gly Gln Cys Leu Ser Cys Arg Asn Tyr Ser Arg Gly Gly Val			
	515	520	525
Cys Val Thr His Cys Asn Phe Leu Asn Gly Glu Pro Arg Glu Phe Ala			
530	535	540	
His Glu Ala Glu Cys Phe Ser Cys His Pro Glu Cys Gln Pro Met Glu			
545	550	555	560
Gly Thr Ala Thr Cys Asn Gly Ser Gly Ser Asp Thr Cys Ala Gln Cys			
	565	570	575

Ala	His	Phe	Arg	Asp	Gly	Pro	His	Cys	Val	Ser	Ser	Cys	Pro	His	Gly
			580					585					590		
Val	Leu	Gly	Ala	Lys	Gly	Pro	Ile	Tyr	Lys	Tyr	Pro	Asp	Val	Gln	Asn
		595				600					605				
Glu	Cys	Arg	Pro	Cys	His	Glu	Asn	Cys	Thr	Gln	Gly	Cys	Lys	Gly	Pro
	610					615					620				
Glu	Leu	Gln	Asp	Cys	Leu	Gly	Gln	Thr	Leu	Val	Leu	Ile	Gly	Lys	Thr
625					630					635					640

<210> 3
 <211> 190
 <212> PRT
 <213> Homo sapiens

Met	Arg	Ala	Asn	Asp	Ala	Leu	Gln	Val	Leu	Gly	Leu	Leu	Phe	Ser	Leu
1			5					10					15		
Ala	Arg	Gly	Ser	Glu	Val	Gly	Asn	Ser	Gln	Ala	Val	Cys	Pro	Gly	Thr
		20					25					30			
Leu	Asn	Gly	Leu	Ser	Val	Thr	Gly	Asp	Ala	Glu	Asn	Gln	Tyr	Gln	Thr
	35						40					45			
Leu	Tyr	Lys	Leu	Tyr	Glu	Arg	Cys	Glu	Val	Val	Met	Gly	Asn	Leu	Glu
	50					55					60				
Ile	Val	Leu	Thr	Gly	His	Asn	Ala	Asp	Leu	Ser	Phe	Leu	Gln	Trp	Ile
65				70					75					80	
Arg	Glu	Val	Thr	Gly	Tyr	Val	Leu	Val	Ala	Met	Asn	Glu	Phe	Ser	Thr
			85					90						95	
Leu	Pro	Leu	Pro	Asn	Leu	Arg	Val	Val	Arg	Gly	Thr	Gln	Val	Tyr	Asp
			100					105					110		
Gly	Lys	Phe	Ala	Ile	Phe	Val	Met	Leu	Asn	Tyr	Asn	Thr	Asn	Ser	Ser
	115						120					125			
His	Ala	Leu	Arg	Gln	Leu	Arg	Leu	Thr	Gln	Leu	Thr	Glu	Ile	Leu	Ser
	130					135					140				
Gly	Gly	Val	Tyr	Ile	Glu	Lys	Asn	Asp	Lys	Leu	Cys	His	Met	Asp	Thr
145				150					155					160	
Ile	Asp	Trp	Arg	Asp	Ile	Val	Arg	Asp	Arg	Asp	Ala	Glu	Ile	Val	Val
			165					170					175		
Lys	Asp	Asn	Gly	Arg	Ser	Cys	Pro	Pro	Cys	His	Glu	Val	Cys		
		180						185					190		

<210> 4
 <211> 1914
 <212> DNA
 <213> Homo sapiens

<400> 4

agggcgaaacg	acgctctgca	gggtgctgggc	ttgctttttca	gcctggcccg	gggctccgag	60
gtgggcaact	ctcaggcagt	gtgtcctggg	actctgaatg	gcctgagtgt	gaccggcgat	120
gctgagaacc	aataccagac	actgtacaag	ctctacgaga	ggtgtgaggt	ggtgatgggg	180
aaccttgaga	ttgtgctcac	gggacacaat	gccgacctct	ccttcctgca	gtggattcga	240
gaagtgacag	gctatgtcct	cgtggccatg	aatgaattct	ctactctacc	attgcccaac	300
ctccgcgtgg	tgcgaggac	ccaggctctac	gatgggaagt	ttgccatctt	cgtcatgttg	360
aactataaca	ccaactccag	ccacgctctg	cgccagctcc	gcttgactca	gctcaccgag	420
attctgtcag	ggggtgttta	tattgagaag	aacgataagc	tttgtcacat	ggacacaatt	480
gactggaggg	acatcgtag	ggaccgagat	gctgagatag	tggatgaagg	caatggcaga	540
agctgtcccc	cctgtcatga	ggtttgcaag	gggcgatgct	ggggctcctg	atcagaagac	600
tgccagacat	tgaccaagac	catctgtgct	cctcagtgtg	atggctactg	ctttggggcc	660
aaccccaacc	agtgtgtcca	tgatgagtgt	gccgggggct	gctcaggccc	tcaggacaca	720
gactgctttg	cctgccggca	cttcaatgac	agtggagcct	gtgtacctcg	ctgtccacag	780
cctcttgtct	acaacaagct	aactttccag	ctggaaccca	atccccacac	caagtatcag	840
tatggaggag	tttgtgtagc	cagctgtccc	cataactttg	tggatgatca	aacatcctgt	900
gtcagggcct	gtcctcctga	caagatggaa	gtagataaaa	atgggctcaa	gatgtgtgag	960
ccttgtgggg	gactatgtcc	caaagcctgt	gagggaacag	gctctgggag	ccgcttccag	1020
actgtggact	cgagcaacat	tgatggattt	gtgaactgca	ccaagatcct	gggcaacctg	1080
gactttctga	tcaccggcct	caatggagac	ccctggcaca	agatccctgc	cctggacca	1140
gagaagctca	atgtcttccg	gacagtacgg	gagatcacag	gttacctgaa	catccagtcc	1200
tggccgcccc	acatgcacaa	cttcagtgtt	ttttccaatt	tgacaacat	tggaggcaga	1260
agcctctaca	accggggcct	ctcattgttg	atcatgaaga	acttgaatgt	cacatctctg	1320
ggcttccgat	ccctgaagga	aattagtgt	gggcgtatct	atataagtgc	caataggcag	1380
ctctgtctacc	accactcttt	gaactggacc	aagggtgctt	gggggcctac	ggaagagcga	1440
ctagacatca	agcataatcg	gccgcgcaga	gactgcgtgg	cagagggcaa	agtgtgtgac	1500
ccactgtgct	cctctggggg	atgctggggc	ccaggccctg	gtcagtgtct	gtcctgtcga	1560
aattatagcc	gaggaggtgt	ctgtgtgacc	cactgcaact	ttctgaatgg	ggagcctcga	1620
gaatttgccc	atgaggccga	atgcttctcc	tgccaccgg	aatgccaacc	catggagggc	1680
actgccacat	gcaatggctc	gggctctgat	acttgtgtct	aatgtgcca	ttttcgagat	1740
gggccccact	gtgtgagcag	ctgcccccat	ggagtcctag	gtgccaagg	cccaatctac	1800
aagtaccag	atgttcagaa	tgaatgtcgg	ccctgccatg	agaactgcac	ccaggggtgt	1860
aaaggaccag	agcttcaaga	ctgttttaga	caaacactgg	tgctgatcgg	caaa	1914

<210> 5

<211> 475

<212> DNA

<213> Homo sapiens

<400> 5

gacacctgtcc	tgggactctg	aatggcctga	gtgtgaccgg	cgatgctgag	aaccaataacc	60
agacactgta	caagctctac	gagaggtgtg	aggtggtgat	ggggaacctt	gagattgtgc	120
tcacgggaca	caatgccgac	ctctccttcc	tgcagtggat	tcgagaagtg	acaggctatg	180
tcctcgtggc	catgaatgaa	ttctctactc	taccattgcc	caacctccgc	gtggtgcgag	240
ggaccacagt	ctacgatggg	aagtttgcca	tcttcgtcat	gttgaactat	aacaccaact	300
ccagccacgc	tctgcgccag	ctccgcttga	ctcagctcac	cgagattctg	tcagggggtg	360

tttatattga gaagaacgat aagctttgtc acatggacac aattgactgg agggacatcg 420
tgagggaccg agatgctgag atagtgggtga aggacaatgg cagaagctga ctgga 475

<210> 6
<211> 19
<212> DNA
<213> Artificial Sequence

<220>
<223> Primer

<400> 6
tctgCGGagT catgagggc 19

<210> 7
<211> 48
<212> DNA
<213> Artificial Sequence

<220>
<223> Primer

<400> 7
tgtgaccacg actagccgTt tctgatgttc ctgctactgc tgTtcact 48

<210> 8
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Primer

<400> 8
tctagagatt ttctgCGGag tcatg 25

<210> 9
<211> 15
<212> DNA
<213> Artificial Sequence

<220>
<223> Primer

<400> 9
gacgacgacg acaag 15

<210> 10
<211> 16
<212> DNA
<213> Artificial Sequence

<220>
<223> Primer

<400> 10
gccatggctg atatcg 16

<210> 11
<211> 23
<212> DNA
<213> Artificial Sequence

<220>
<223> Primer

<400> 11
gcaccaccac caccaccact gag 23

<210> 12
<211> 19
<212> DNA
<213> Artificial Sequence

<220>
<223> Primer

<400> 12
acatcaagca taatcggcc 19

<210> 13
<211> 19
<212> DNA
<213> Artificial Sequence

<220>
<223> Primer

<400> 13
aggctcccca ttcagaaag 19

<210> 14
 <211> 82
 <212> PRT
 <213> Homo sapiens

<400> 14
 Arg Gln Leu Cys Tyr His His Ser Leu Asn Trp Thr Lys Val Leu Arg
 1 5 10 15
 Gly Pro Thr Glu Glu Arg Leu Asp Ile Lys His Asn Arg Pro Arg Arg
 20 25 30
 Asp Cys Val Ala Glu Gly Lys Val Cys Asp Pro Leu Cys Ser Ser Gly
 35 40 45
 Gly Cys Trp Gly Pro Gly Pro Gly Gln Cys Leu Ser Cys Arg Asn Tyr
 50 55 60
 Ser Arg Gly Gly Val Cys Val Thr His Cys Asn Phe Leu Asn Gly Glu
 65 70 75 80
 Pro Arg

<210> 15
 <211> 456
 <212> DNA
 <213> Homo sapiens

<400> 15
 atggtttgtg tagccagctg tccccataac tttgtggtgg atcaaacatc ctgtgtcagg 60
 gcctgtcctc ctgacaagat ggaagtagat aaaaatgggc tcaagatgtg tgagccttgt 120
 gggggactat gtcccaaagc ctgtgaggga acaggctctg ggagccgctt ccagactgtg 180
 gactcgagca acattgatgg atttgtgaac tgcaccaaga tcctgggcaa cctggacttt 240
 ctgatcaccg gcctcaatgg agacccttg cacaagatcc ctgccctgga cccagagaag 300
 ctcaatgtct tccggacagt acgggagatc acagggttacc tgaacatcca gtccctggccg 360
 cccacatgc acaacttcag tgttttttcc aatttgacaa ccattggagg cagaaagctt 420
 gcggccgcac tcgagcacca ccaccaccac cactga 456

<210> 16
 <211> 148
 <212> PRT
 <213> Homo sapiens

<400> 16
 Met Val Cys Val Ala Ser Cys Pro His Asn Phe Val Val Asp Gln Thr
 1 5 10 15
 Ser Cys Val Arg Ala Cys Pro Pro Asp Lys Met Glu Val Asp Lys Asn
 20 25 30
 Gly Leu Lys Met Cys Glu Pro Cys Gly Gly Leu Cys Pro Lys Ala Cys
 35 40 45

[illegible]